In the Specification:

The applicant makes the following changes to the specification:

The paragraph bridging pages 1 and 2 (page 1, line 26 to page 2 line 12) is corrected to read as follows:

In order to avoid laser ~~induces~~ induced detrimental changes in the plastic, it is necessary to decrease the laser power density on the surface of the black plastic. One way to reduce laser power density is to reduce total laser power that illuminates the surface of the black plastic. But at same time, in order to accumulate enough signal for identification, the signal collection time has to be increased proportionally. Obviously, this is not acceptable for rapid identification. The other way to reduce the power density of the laser is to increase the size of the laser spot that illuminates the surface of the plastic, while still maintaining a sufficiently high laser power of 1Watt to allow rapid identification. Experiments have shown that to avoid laser induced detrimental changes in black plastic samples, in the case of 1 Watt total laser power at wavelength 800nm, the size of the laser spot illuminating the surface of a black plastic sample needs to be increased 40 times, to a size that is greater than 3 mm in diameter. As a consequence, the signal acceptance area of the collection fiber bundle and the acceptance area of the spectrograph (slit-height times slit-width) must also be increased 40 times~~, as illustrated as in Fig-1~~. It is almost impossible to achieve this from a technical point of view. Enlarging the laser spot size without changing the optical train and components would cause the signal from the sample to overfill the collection fiber bundle and thus decrease the collected signal intensity.

The second full paragraph on page 3 (lines 17-19) is corrected to read as follows:

Fig-1 shows that when increasing the laser spot size so as to decrease or reduce the power density to a manageable ~~lever~~ level with a stationary objective lens the Raman signal acceptance area of the fiber bundle needs to be increased.

On page 4, between the second and third paragraphs, (between lines 14 and 15) the applicant inserts the following new paragraph:

Experiments have shown that to avoid laser induced detrimental changes in black plastic samples, in the case of 1 Watt total laser power at wavelength 800nm, the size of the laser spot illuminating the surface of a black plastic sample needs to be increased 40 times, to a size that is greater than 3 mm in diameter. Figure 1 schematically shows such an enlargement, as compared to Figure 2, of the illuminated surface to cover the area centered on (0,0,f) but extending from (a,0,f) to (-a,0,f). As a consequence of such an enlargement of the laser illumination area, the Raman signal is spread over an area centered on (0,0,L) extending from (A,0,L) to (-A,0,L) thus requiring an acceptance area of the collection fiber bundle, shown in Figure 2, to be correspondingly increased. As described earlier, the enlargement of the laser spot size without changing the optical train components would cause the signal from the sample to overfill the collection fiber bundle and thus decrease the collected signal intensity to an unsatisfactory level.

The paragraph bridging pages 5 and 6 (page 5 line 22 to page 6 line 14) is corrected to read as follows:

In a commercial embodiment, the probe 12 is configured to illuminate and collect light scattered from a samples, not shown, that are situated in front of optical window 26 at a front end of nose cone 24 as shown in FIG. 5. Probe 12 includes a housing 14 in the form of a generally cylindrical member 22 and includes a nose cone 24 containing an optical window 26. The optical window 26 can comprise a simple opening through which light can pass, but in a preferred embodiment the optical window 26 comprises a sapphire window mounted within the nose cone 24 to protect the optics within probe 12 from airborne dust and assorted particles. The probe 12 can be easily positioned relative to a sample by means of handle 28 that can constitute a coupling structure for robotic manipulation. A trigger 30 is situated on the handle 28 for easy operation by an operator's index finger. Alternatively, the trigger 30 can be computer controlled. A longitudinal rail 32 is fixed to handle 28 or equivalent robotic coupling structure to provide a foundation for the optical components within the probe 12. The generally cylindrical housing member 22 includes a longitudinal slot 16, the edges 18 of which contact opposing edges of the longitudinal rail 32. The housing 22 is completed by back wall 34 having an outer perimeter 64. In the preferred embodiment, the generally cylindrical housing member 22 has an internal diameter of about 6.0 cm. It is understood, however, that the internal diameter and other dimensions of housing member 22 can vary in accordance with the constraints imposed on the system by its intended use as well as the components to be housed therein. In the preferred embodiment, the housing member 22, nose cone 24, longitudinal rail 32, and back wall 34 are construction of aluminum that has been black anodized. However, a wide variety of metals, copolymers, and composites can be used to construct probe 12 in accordance with the present invention.

The full paragraph on page 6 (lines 15-31) is corrected to read as follows:

The longitudinal rail 32 includes a lower surface 31, an upper surface 33, a rearward end 35, and a forward end 37 as shown in Fig. 5. A plurality of lateral slots 39a through 39g are milled into the upper surface 33 of the longitudinal rail 32 generally perpendicular to the length dimension of the longitudinal rail 32, except slot 39c which is inclined at an angle of about 10°. Pivot pins 38 are fixed in the center of each of the lateral slots 39a and 39c to permit small adjustments in the alignment of the supports fastened therein. Probe 12 employs sampling optics 42 to collect the scattered Raman radiation, discriminating with an extinction ratio of about 10^6 (1 ppm) or better for the Raman-shifted component. Support 46 is fastened in slot 39e to hold lens 36 adjacent the exit end 41 of optical fiber 66 carrying light from a laser source. Support 49 is fastened in slot 39b to hold a band pass filter 48, which controls the wavelength deviation of the source light directed toward the sample through optical window 26. Support 51 is fastened in slot 39a to hold an objective lens system 54 and mirror 50. Supports 46 and 49 also support the ends of baffling tube 47 creating a specific segregated region <u>44</u> within the housing 22 between the lens 36 and band pass filter 48.